

# 1/2" Recessed Magnasphere

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## *Recessed 1/2" Switch Set with Magnasphere Technology MS150-12 / MS150-T*

- ◆ Higher level of security
- ◆ Spherical magnetism
- ◆ Resistant to magnetic tamper and defeat
- ◆ Hermetically sealed
- ◆ Designed for hollow core doors and windows
  - ◆ Hole size allows for extra wire, etc.
- ◆ Installs firmly in wood, vinyl and aluminum
  - ◆ Press or snap fit
- ◆ Built-in E.O.L. Resisters and Diodes upon request
  - ◆ Switches and magnets available separately
  - ◆ Colors: white, brown or gray, black
  - ◆ Lifetime Warranty
  - ◆ Standard Gap 3/8"



MS150-12



MS150-T

## INSTALLATION APPLICATIONS

Larger than 3/8" but smaller than 3/4", GRI introduces their innovative switch design, the 1/2" diameter, flush mount MS150-12. This is in response to requests from our customers for a switch that would give them additional "working room" for extra wire, E.O.L. resisters, etc., yet would install in the popular hollow core windows. The GRI MS150-12 is a 1/2" diameter contact, manufactured from a special polyvinyl material with a unique collar design that will "press-fit" into wooden or vinyl clad windows with a "snap-in" fit for hollow core vinyl or aluminum windows. The GRI MS150-12 is paired with a matching 1/2" magnet case to offer the installer up to a 1/2" gap. The MS150 switch can also be paired with any of the wide selection of GRI magnets to help resolve difficult installation applications, such as our MF-875. Patent Pending.

Continued on back

**WARRANTY:** Lifetime warranty against workmanship, material and factory defects.

GEORGE RISK INDUSTRIES, INC.  
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Made in U.S.A.

C\_HS 8 MS150\_magnasphere

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## CONSTRUCTION

Magnasphere's® patented technology utilizes the principal of Spherical Magnetism. The heart of the switch is a magnetic sphere, or ball contact. This sphere is housed in a durable metal housing. Completing the switch is a seal that contains the contacting electrode, insulated from the magnetic perimeter by a time proven ceramic to metal bond.

The case or seal provides the second contact point required to complete the electrical circuit.

The seal/electrode cap is welded to the housing in an inert atmosphere providing a hermetically sealed contact.

## OPERATION

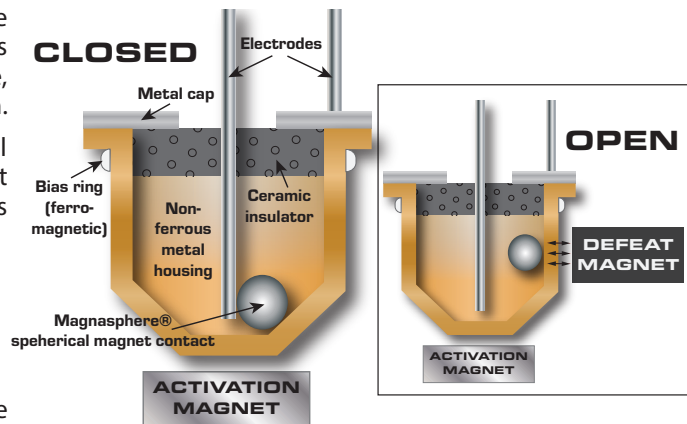
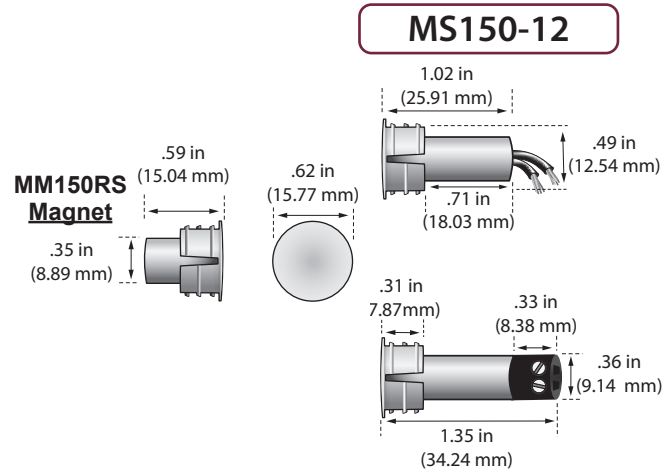
In the normally open position, the magnetic sphere is attracted to the ferromagnetic portion of the seal cap, away from the electrode. Because of this attraction the switch may be positioned in any orientation and will remain open.

When the actuator magnet approaches the switch from the end of the switch opposite the electrode, the magnetic ball is attracted to this field, and "snaps" to the bottom of the case, making contact with the electrode and case, closing the switch.

Unlike a reed switch that responds to a magnet within a global activation zone, the Magnasphere® switch responds to a magnet only within a restricted zone. A magnet outside the zone pulls the ball off center electrode to open the switch.

## PRINCIPLES OF SPHERICAL MAGNETISM:

Finite element analysis shows magnetic flux paths of the Magnasphere® magnetic ball contact. The spherical shape is not polarity sensitive and will be attracted to either pole of the actuating magnet.



### GRI PRODUCTS MEET OR EXCEED THESE MINIMUM GENERAL SPECIFICATIONS:

Part Number	Loop Type	Electrical Configuration	Reed Form	Max. Initial Contact Resistance (Ω)	Max. Contact Rating (W)	Max. Switching Voltage (VDC)	Max. Switching Current (A)
MS150-12	Closed	N/O	A	.400	5	250 AC/DC	.180*
MS150-T	Closed	N/O	A	.400	5	250 AC/DC	.180*

\*Higher maximum switching current ratings available.

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